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DEVELOPMENT OF THE MATE EXPULSION INVENTORY

A Thesis

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

in

Psychological Sciences

by

Nestor Maria

September 2019

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Approved by:

Dr. Cari Goetz, Committee Chair, Psychology

Dr. Joseph Wellman, Committee Member

Dr. Miranda McIntyre, Committee Member

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ABSTRACT

Although humans engage in committed, long-term pair bonds, many romantic relationships end because one partner no longer desires to be in the relationship. Much of the literature on romantic relationship psychology and behavior has focused on mechanisms related to maintaining a partner. Mate retention behavior functions to deter romantic partners from defection and fend off potential alternative partners. However, when individuals are in a relationship where the costs of remaining in the relationship outweigh the benefits of leaving the relationship, mate expulsion, not retention, may be the desired goal. The present thesis examines mate expulsion behavior and psychology with the goal of developing a measure of mate expulsion to parallel a widely-used measure of mate retention. In my pilot studies, participants (*n* = 103) nominated behaviors and tactics that people use to reduce commitment in and terminate relationships. I identified 168 unique mate expulsion behaviors from these nominations that fell in the following four categories: *signaling a lack of commitment to their partner, signaling their availability to others potential partners, extracting oneself from shared relationship commitments or investments,* and *reducing dependency on one's partner or relationship*. A separate set of participants (*n* = 131) rated the frequency with which they had used the behaviors, or had seen their partner use the behaviors, in their actual past break-ups. This procedure reduced the list of utilized tactics to 51 mate expulsion behaviors. A third set of participants (n = 290) in relationships rated the frequency with which they engaged in the 51

behaviors in their current relationship and completed measures of relationships satisfaction and mate retention. As expected, mate expulsion was negatively related to relationship satisfaction. I conducted a preliminary factor analysis using these data, which revealed 7 clusters of mate expulsion behavior: For my thesis, I collected a larger, less gender-biased sample to 1) confirm the factor structure of the mate expulsion inventory and 2) examine the relationships between the mate expulsion inventory, mate retention, and relationship satisfaction. Participants (n = 410) completed the Couple Satisfaction Index-16, the Mate Retention Inventory Short-Form, and the Mate Expulsion Inventory. Mate expulsion was again negatively correlated with relationship satisfaction and a similar, small positive correlation was replicated between mate expulsion and mate retention. My hypothesized model for the confirmatory factor analysis was acceptable but not excellent. I attempted several modifications to improve the measures of fit. Ultimately, the best model included the removal of specific items and eliminating a latent variable. This thesis produced a concise list of mate expulsion behaviors and has expanded on the literature of mating psychology in respect to relationship termination. These results suggest human mating psychology may include mechanisms that function to terminate and maintain relationships.

Key words: mate retention, mate expulsion, romantic relationships

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CHAPTER ONE

INTRODUCTION

Background

As a serially long-term pair-bonding species, one of the most important adaptive problems humans faced was how to successfully end a current romantic relationship when the fitness benefits of staying in that relationship no longer outweighed the costs of leaving that relationship (Buss, Goetz, Duntley, Asao, & Conroy-Beam, 2017). Much of the literature on romantic relationships examines why individuals are motivated to maintain their current relationship and the behavior that functions to retain a mate (Buss, 1988a; Buss & Shackleford, 1997; Buss, Shackelford, & McKibben, 2008). However, there has been less emphasis on the behavior people engage in to terminate long-term relationships. In the present thesis, I developed a theoretically-based taxonomy of mate expulsion behaviors. In my pilot studies, I conducted an act nomination to capture a broad list of potential mate expulsion behaviors and presented this list to a separate set of participants to determine which behaviors have actually been implemented as relationship termination tactics. The goal of the present thesis was to build on my pilot data and develop the *Mate Expulsion Inventory*, which is a measure of participants' use of mate expulsion tactics and desire to terminate their relationship.

Mate Retention Behavior

After successfully selecting and attracting a mate, ancestral humans faced the adaptive problem of retaining that mate. Many of the fitness benefits that come from romantic relationships, such as division of childcare labor, and pooling of resources, only arise if a romantic relationship is maintained for many months, or years (for a review of the fitness benefits associated with long-term pair bonds in human, see Conroy-Beam, Goetz, and Buss, 2015). Researchers have hypothesized that specific psychological mechanisms evolved to motivate behaviors that function to retain romantic partners. These include mate retention behaviors that would have prevented one's partner from defecting from the relationship and defended from potential mate poachers (Buss, 1988a; Buss & Shackelford 1997). Failing to retain a romantic partner would have been costly. Time, energy, and resource investment spent on that relationship could have been put towards other, more fitness beneficial investments. There also would have been sex-specific fitness costs to partner defection from a relationship. For men, failure to keep their partner sexually faithful may have resulted in unwarranted investments in offspring not genetically related to themselves (i.e. paternity uncertainty); for women failure to maintain their partner may have resulted in a lack of parental investment for potential offspring. (Buss, 1988a; Buss & Shackelford, 1997; Buss, 2002).

The Mate Retention Inventory (MRI) provides a measure of the frequency with which a person engages in a wide variety of mate retention behaviors (Buss,

1988). To develop the MRI, undergraduate participants were asked to nominate behaviors that "people do when they want to prevent their partner from getting involved with someone else (Buss, 1988a, p .296)." This act nomination procedure produced 104 distinct acts. Buss (1988a) categorized these acts into 19 homogenous act clusters. These clusters were partitioned into two broad categories: *intersexual manipulation* (behaviors directed toward one's partner) and *intrasexual manipulation* (behaviors directed toward other potential competitors). Clusters under the intersexual manipulation category were organized in three groups: *direct guarding (vigilance, concealment of mate, and monopolize mates time), negative inducements (threaten infidelity, punish mate's threat to infidelity, emotional manipulation, commitment manipulation, and derogation of competitors)* and *positive inducements (resource display, sexual inducements, enhancing physical appearance, emphasize love and caring, and submission and debasement)*. The intrasexual manipulation category was comprised of mate retention behaviors that function to deter potential mate poachers. Behaviors associated with intrasexual manipulation consisted of two categories: *public signals of possession (verbal signs of possession, physical signals of possession, and possessive ornamentation) and negative inducements (derogation of mate to competitors, intrasexual threats, and violence).* The MRI is a self-report measure that asks participants to rate how often they performed each act within the past year. Participants rate each item on a scale of 1 to 4 (1 = never, 2 = rarely, 3 = sometimes, 4 = often; Buss, 1988a).

Since the initial development of the MRI, researchers have established the validity of the MRI and applied cross culturally. The Cronbach alphas for the MRI have been tested to be mostly acceptable, ranging from .67 to .72 across studies (Shackelford, Goetz, Buss, 2005; Goetz et al., 2005). De Miguel and Buss (2011) examined mate retention behaviors utilizing a translated mate retention inventory by Buss (1988a) within a Spanish sample. They found similar sex differences to that of Buss (1988a) where men more than women reported greater use of resource display as a retention tactic and women more than men reported greater use of appearance enhancement as a mate retention tactic. One study replicated the reliability of the measure amongst married couples and found that men and women were able to provide reliable accounts of their partner's mate retention behaviors (Shackelford, Goetz, & Buss, 2005). Buss, Shackelford, and McKibben (2008) created a shorter, similarly valid and reliable measure of mate retention behaviors. This short-form mate retention inventory consisted of 38 items, two items from each of the 19 clusters. In their study participants filled out the Mate Retention Inventory Long-Form and Mate Retention Inventory-Short Form (MRI-SF). They found the short-form measure to be highly correlated with the original measure of mate retention and with assessments of controlling behavior, violence, physical injury, and sexual coercion. The Mate Retention Inventory Short-Form has been tested cross-culturally and has produced similar findings overall. In a Brazilian sample, Cronbach alphas produced an adequate reliability index for this measure and sex differences were found similar to those

found in Buss (1988a) and Buss and Shackelford (1997) where men more than women used resource display and women more than men used appearance enhancement (Lopes et al., 2016). Equivalently, mate retention behaviors were examined in a Pakistani context where they found the MRI-SF to be a reliable tool (α = .90) and men reported greater use of resource display behaviors than women (Chaudhary, Al-Shawaf, & Buss, 2018). These findings suggest similarities and differences in the use of mate retention behaviors in different cultural contexts utilizing the MRI-SF.

Mate retention behaviors have also been categorized as either cost-inflicting or benefit-provisioning. Direct guarding, intrasexual and intersexual negative inducements are categorized as high-risk, cost-inflicting mate retention behaviors. Behaviors such as monopolizing someone's time or insulting them could inflict costs on their partner's network of social support and self-esteem (McKibben et al., 2007; Miner, 2009). These behaviors function to maintain their partners by suggesting they are unable to secure a better partner and other potential partners are not interested in them, decreasing their chances of defection. However, these behaviors prove to be high-risk as they may conflict with their partner's interests and gradually lead them to defect from the relationship (McKibben et al., 2007; Miner, 2009). In contrast, positive inducements and signals of possession are categorized as low-risk, benefit-provisioning behaviors. Buying their partner an expensive gift or displays of affection may increase relationship satisfaction and improve their partner's self-

esteem, reducing the likelihood of infidelity or relationship defection (Buss, 1988; Buss & Shackelford, 1997; Miner, 2009). Lopes and Shackelford (2018) argued that people can be categorized into one of three different strategy-types, depending on the frequency with which they use cost-inflicting or benefit-provisioning mate retention behaviors. Disengaged strategists are characterized by infrequent use of both cost-inflicting and benefit-provisioning behaviors, exhaustive strategists frequently use both type of behaviors, and benevolent strategists frequently use of benefit-provisioning behaviors but infrequently use cost-inflicting behaviors. They found that men use the benevolent strategy more often, specifically when they report high levels of relationship satisfaction. This suggests that the more satisfied men were in their relationship the more they participated in benefit-provisioning behaviors than cost-inflicting.

One factor associated with greater use of mate retention behaviors is the threat of infidelity. In ongoing romantic relationships, individuals outside the relationship may try to lure partners out of the relationship and the availability of other potential partners may motivate the partner to defect. Therefore, if an individual perceived a potential risk of infidelity, it would have benefited them to dedicate even greater effort toward mate guarding and retention (Buss and Shackelford, 1997). Men faced the adaptive problem of paternity uncertainty; therefore, threat of sexual infidelity would have been particularly costly (Buss, 2000; Goetz, Shackelford, Romero, Kaighobadi, & Miner, 2008). Effective use of mate retention behaviors would have helped men avoid the fitness costs

associated with investing in offspring not genetically related to themselves (i.e. paternity uncertainty; Buss & Shackelford, 1997). When men perceive potential risks of infidelity, they may engage in sexual coercion more often and use more mate retention behaviors (Goetz & Shackelford, 2006). Men's partners who are physically attractive and whose personality traits appeal to other potential partners may have more opportunities of infidelity. In other words, partners who are perceived as desirable to others constituted higher risks of infidelity, which should motivate increased use of mate retention behaviors. Therefore, individuals with partners whose traits are associated with higher risks of infidelity would be motivated to perform behaviors to fend off other potential competitors (Goetz et al., 2005). Men also perform more mate retention behaviors after spending a proportion of time away from their partner- a situation which may increase the chances of partner infidelity (Starratt et al., 2007). Men low on conscientious who perceive a high risk of infidelity are more likely to engage in partner-directed violent mate retention behaviors (Kaighobadi, Shackelford, Popp, Moyer, Bates, & Liddle, 2009). This suggests that men unable to anticipate consequences of violence towards partners are more likely to participate in these types of behaviors in an attempt to prevent infidelity. Individuals aware of the potential consequences of utilizing violent behaviors are less likely to engage in them even if the perception of infidelity is high, suggesting men who are more conscientious may assess violent behaviors to motivate their partner to leave the relationship (Kaighobadi et al., 2009).

There are documented sex differences in the frequency and type of mate retention behaviors people use. Although men and women are similar in a number of mate preference domains, there are certain traits in partners that men value more than women, and certain traits that women value more than men. Men place a greater premium on a woman's physical attractiveness, which provides cues to her fertility and reproductive value. Women, who bear the costs associated with greater obligatory parental investment, value indicators of resource potential more than men do (Buss, 2016). These sex differences in mate preferences map on to documented sex differences in mate retention behavior. Men married to younger, more physically attractive women engage in more mate retention (Buss & Shackelford, 1997). Men who perceived their partners to be more physically attractive reported greater engagement in greater resource display, appearance enhancements, verbal signs of possession, and intrasexual threats (Buss & Shackelford, 1997). This evidence indicates that not only do men's preferences influence their likelihood of engaging in mate retention, but women's preferences for resources indicators influences the tactics men use. Similarly, mate retention behaviors in women have been documented to function according to men's economic resources. Women reported mate retention behaviors more frequently when their partners had higher incomes, more specifically, they used behaviors such as emotional manipulation, resource display, appearance enhancement, verbal possession signals, and possessive ornamentation (Buss & Shackelford, 1997). This evidence also suggest specific

mate retention behaviors for women are centered around displaying their reproductive value (Buss, 1988, Buss & Shackelford, 1997). Cross-culturally these sex differences in mate retention behaviors have been documented in samples from Spain, Pakistan, and Iran (Atari, Barbaro, Shackelford, & Chegeni, 2017; Chaudhary, Al-Shawaf, & Buss, 2018; Lopes et al., 2016).

Mate retention psychology functions to maintain desirable partners. However, contexts in which individuals want to leave their current relationship, and the associated psychological mechanisms, require study as well. Measures of mate retention examine frequencies in mate retention behaviors and lack measurements associated with wanting to leave a partner. If an individual is motivated to maintain their current partner, they will participate in mate retention behaviors more often, but if they are not as motivated the frequency of mate retention behaviors are lower. For example, Oltmanns, Markey, and French (2017) found that individuals who had highly desirable partners were more likely to participate in mate retention behaviors while individuals with less desirable partners utilized them less. However, lack of mate retention behavior does not necessarily indicate that an individual wants to expulse their mate; rather it could be that an effort is not needed to maintain that partner. In addition, a lack of mate retention behaviors does not necessarily signal to an individual's partner they are unsatisfied with the relationship or have lost interest. Individuals who are not as desirable as others may be highly motivated to exert extreme efforts in mate retention because their current partner is a "good catch," while more desirable

individuals may not need to engage in as much mate retention behavior to maintain their partner. Similarly, individuals in an environment rich with alternative potential partners better than their current partner have been documented to perform less mate retention behavior (Conroy-Beam, Goetz, & Buss, 2016). Less mate retention behavior may allow them to devote time and effort to considering other options, but they may not currently be interested in leaving their relationship. When individuals believe the costs of remaining in their current relationship outweigh the benefits specific behaviors should have evolved to expulse their partner. Lack of mate retention behaviors alone would not have been able to drive partners away, instead, mate expulsion behaviors would have helped solve the adaptive problem of successfully getting rid of mates while minimizing potential costs.

Relationship Termination and Dissolution

When individuals no longer benefit from a relationship, mate expulsion may be the desired outcome. If the costs are too high, specific psychological mechanisms should have evolved to detect and abandon costly partners for a more beneficial partner. Buss, Goetz, Duntley, Asao, & Conroy-Beam (2017) advanced the mate switching hypothesis as a framework for understanding the specific inputs, decision rules and outputs related to psychological mechanisms involved in relationship termination and re-mating. Buss and colleagues (2017) argued that mate-switching psychology should be sensitive to a variety of cues that would have been ancestrally correlated with the fitness costs and benefits of

staying in a current relationship. For example, they argued that changes in mate value (i.e. an individual's relative desirability to others) between partners or changes in the desirability of alternative partners available should toggle mate-switching motivations. Some cues relevant to mate-switching psychology should be sex-specific. For example, men who have partners unable to bear offspring could increase their reproductive success by mate-switching. For women, male partners low in status, who were bad fathers, or who were unhealthy may have been particularly costly, motivating mate-switching (Buss et al., 2017). Mate switching may also function to optimize resource allocation from one partner to another; retracting resources from their current mate to a better, alternative mate (Boutwell, Barnes, & Beaver, 2015). If further investment in the relationship is considerably costly, investment in another partner would allow for a decreased loss in resources in the former partner. There are also costs associated with leaving a relationship. One potential cost associated with exiting a relationship would be potential damage to an individual's reputation. Across cultures people assess individuals, particularly women, who have multiple partners as problematic and brand them as "cheaters." Mate switching can also produce costs associated with losing familial and kin networks (Marlowe, 2004). Loss in social support is another potential cost. Friendships accrued while in the relationship may be lost after partners separate and relationships with former in-laws may be severed. In addition, former partners may inflict costs against the other. Such inflicted costs involve withdrawal of financial support, revealing

intimate information, and in serious cases, death (Buss & Duntley, 2011). Lastly, offspring resulting from the relationship may suffer from risks in losing economic and parental investment, protection from both parents, and abuse when individuals re-mate (Hurtado & Hill, 1992; Buss et al. 2017). These costs associated with leaving intimate relationships suggest specific mechanisms could have evolved to help minimize costs and maximize benefits when leaving a relationship.

In order to mate-switch, a person must successfully extract themselves from their current relationship. The most explicit and obvious way to expulse one's partner would be to immediately, explicitly terminate the relationship. However, the consequences related to relationship termination can be detrimental. Perilloux and Buss (2008) investigated the costs and coping strategies associated with initiating a break-up (rejecter) and being the victim of a break-up (rejectee). Specific costs associated with relationship termination are experienced by both men and women and some costs are sex specific. For example, female rejecters were found to report more costs associated with persistent stalking by ex-partners to restart the relationship and would experience a loss of protection (Buss et al., 2017). In general, both men and women rejecters reported costs associated with loss of shared friends, sexual access, and ex-partner's resources. Rejecters also reported higher costs of being seen as cruel compared to the rejectee and greater attempts to boost their ex-partner's self-esteem post break-up (Perilloux & Buss, 2008). This illustrates the costs to

reputation associated with relationship termination and the necessity for specific mechanisms to motivate limiting such costs. These results suggest that successful mate expulsion may require a complex set of psychological mechanisms and behaviors.

Using the existing literature on relationship termination, I hypothesized that mate expulsion behavior can be categorized into four general types. First, some mate expulsion behavior should *signal a lack of commitment to their partner*. By signaling to their partner a lack of commitment, partners may anticipate relationship termination and make the transition of leaving the relationship less difficult. For example, a partner may signal reduced affection through negative communication, a factor that positively correlated with relationship termination (Gottman & Notarius, 2000). Another theoretical category of mate expulsion may include behaviors associated with *signaling their availability to others potential partners*. In order to signal one's availability, people may dedicate an effort to enhance their appearances, such as a woman enhancing her physical appearance to attract other potential partners by displaying cues to her reproductive value. In doing so she may also attract other competitors to her mate which may ease her transition from one partner to another (Buss, 1988; Schmitt & Buss, 1996). By signaling availability to other partners, a person minimizes the costs of leaving a relationship because they may be able to enter a new relationship more quickly. *Extracting oneself from shared relationship commitments or investments* may also allow for a reduction

in overall commitment with one's partner. An individual may associate themselves less with mutual friends or families created through the relationship in order to increase the likelihood of relationship termination. Strong social networks are a relationship investment and have been found to decrease the likelihood of termination when conflicts occur, such as arguments, between partners (Goodfriend & Agnew, 2008; Julien, Chartrand, and Begin, 1999). Lastly, *reducing dependency on one's partner or relationship* would be a different category of mate expulsion behavior. Relationship dependency refers to the extent in which a partner relies on their relationship for specific benefits (Drigotas & Rusbult, 1992). A partner may try to reduce this dependency by seeking out new social groups or new friends not acquainted with their current partner. They may also extract themselves from shared investments and commitments with their current partner to reduce their dependency on that partner. There are various predictors of relationship dissolution. Gottman and Levenson (1992) conducted longitudinal studies on some of the psychological predictors of relationship termination. These predictors included hostility, escalation of conflict, and a lack of communication. They had also hypothesized a cascading model which begins with low quality time between partners, leading to the consideration of relationship dissolution, potentially leading to marital separation, and ultimately ending in divorce. Relationship longevity, specifically among those cohabiting, has been found to be a predictor of relationship stability (Brines & Joyner, 1999). Amongst those in emerging adulthood, higher numbers of stressful events were

linked to relationships dissolving early on. In turn, higher levels of stress may lead to more negative interactions with their partner. (Lantagne, Furman, & Novak, 2017; Neff & Karney, 2009). If an individual is unable to adapt to their situation it makes it difficult for them to maintain their relationship.

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To fully understand the range of mate expulsion behavior, I conducted a pilot study in which participants nominated behaviors people engage in to terminate relationships. I modeled this procedure after Buss's (1988) procedure used to identify mate retention tactics. I had a separate set of participants rate

these tactics to identify which were most frequently used in mate expulsion. This generated a list of 51 potential mate expulsion tactics. A third set of participants rated the degree to which they performed these behaviors in their current relationship. I used these ratings to conduct a preliminary factor analysis. I recruited a final set of participants to rate the frequency in which they used these behaviors to validate my measure of mate expulsion.

CHAPTER TWO

PILOT DATA

Act Nomination

The first step in developing a mate expulsion inventory was to have participants nominate acts they, their partners, or others have used to reduce commitment or terminate their relationship. A second set of participants then rated the nominated behaviors to determine which behaviors are genuinely utilized in mate expulsion.

Method

Participants. The act nomination sample consisted of 103 (80 female) college students. Participants were either in a long-term committed relationship, had been in one, or knew someone who has been in a relationship and were provided an incentive of one unit of extra credit towards a psychology course. All participants were used as their responses consisted of recalling behaviors associated with romantic break-ups and any response by participants was considered a potential act. A second set of participants were surveyed to determine which behaviors individuals participate in more frequently than other behaviors. This sample consisted of 133 (Female = 81, M_{age} = 26.64) college students. Seven participants were excluded due to incomplete responses (did not report frequencies of any behavior participation). Participants consisted of individuals who have experienced at least one break-up and were provided an

incentive of one unit of extra credit towards a psychology course. Participants who had not experienced a romantic relationship ending were automatically sent to the end of the survey. This is due to the nature of the questions asked- these behaviors are hypothesized to be used prior to breaking-up; therefore, if they have not experienced a break up, they may have not experienced or used such behaviors.

Procedure and Materials. In the act nomination procedure, participants were asked to nominate five behaviors that men use to reduce commitment, five behaviors that women use to reduce commitment, five behaviors men use to terminate a romantic relationship, and five behaviors men use to terminate a romantic relationship. After data collection, two researchers eliminated behaviors that were nonsensical or repeated responses and created a list of 168 behaviors associated with relationship termination or commitment reduction. Next, the second set of participants were asked to report the frequency of participation in act nominated behaviors. Participants were initially asked demographic questions such as sex, age, and if the participant had experienced a relationship break-up. If participants answered "*no*" they were directed to the end of the survey and thanked for their participation. If participants responded "*yes*" they moved on and were then asked about the level of commitment in their relationship. This ranged from "*exclusive, casual dating relationship*" to "*Domestic Partnership*" as well as the nature of the relationship (homosexual, heterosexual, or other). Lastly, they were asked about the length of the relationship, how long ago it happened, and

the initiation of the break up (the participant or partner), The initiation of the break up ranged from a spectrum of five initiations: 1 *(entirely you)* to 3 (*equally you and your partner*) to 5 = (*entirely your partner*). Participants who initiated the break up were given the following instructions: “Think about your last breakup. Specifically think about your behavior prior to breaking up. Below are 168 actions and behaviors you might have engaged in. For each item please rate how frequently you behaved that way in the time leading up to your breakup compared to earlier in the relationship. You may select NA if an item could not apply to your relationship (for example, if the item asks about childcare and you don't have children, you should select NA).” Participants then rated how often they participated in the 168 behaviors related to ending relationships and commitment reduction on a five-point scale ranging from 1 (*Never*) to 4 (*Often*); 5 (*N/A*). Participants whose partners initiated the break-up were given similar directions except they were asked to think about their partner’s behaviors and how often their partner participated in them. After completing the survey, participants were debriefed and thanked for their participation.

Results and Discussion

After the act nomination procedure, items were combined and eliminated due to repetitive or nonsensical responses. A total of 168 potential items were nominated as behaviors associated with reducing commitment or relationship termination (Table 1).

Table 1. Act Nominated Behaviors Associated with Relationship Termination and Commitment Reduction.

Forgot important things about your partner
Did not return your partner's calls or texts
Did not call or text your partner
Cancelled plans you had with your partner
Avoided talking to your partner when you were together
Avoided spending time with your partner
Drank alcohol
Suggested “taking a break” from the relationship
Was rude, mean, or insulting to your partner in private
Had sex with your partner
Dropped hints that you wanted to reduce commitment in the relationship
Dropped hints that you wanted to break up
Said you didn’t care about your partner or the relationship anymore
Flirted with other people (in person, online, by text, etc.)
Actively avoided your partner
Cheated on your partner
Made false accusations about your partner
Spent more time with your friends without your partner
Avoided spending time with your partner’s family
Avoided spending time with your partner’s friends
Avoided spending money on your partner
Withheld sex from your partner
Did not follow through on promises
Avoided being physically affectionate with your partner (e.g., wouldn’t hug them, hold hands, kiss etc.)
Lied to your partner
Excluded your partner from activities
Told your partner you needed more time alone

Table 1. (Continued)

Avoided doing favors for your partner
Avoided spending time at home with your partner
Came home late (you may select “NA” if you weren’t living together)

Intentionally started fights or arguments with your partner
Was rude, mean or insulting to your partner in front of other people
Avoided being romantic with your partner
Avoided going places with your partner
Tried to make your partner jealous
Purposely got caught cheating
Purposely got caught flirting
Talked to other potential romantic partners
Avoided serious conversations with your partner
Spent more time with other potential partners
Checked out other potential partners
Ignored your partner's feelings or needs
Created an online dating profile or used any dating apps
Behaved coldly toward your partner
Stopped listening to your partner when they talked
Made your partner feel less important
Watched pornography
Helped with joint responsibilities (e.g., household chores, childcare, pet care, etc.)
Partied without your partner (e.g., went out with friends, to bars, clubbing, etc.)
Told your partner that they weren't attractive
Was controlling of your partner
Made excuses about why the relationship wasn't working
Intentionally did things your partner didn't like
Spent a lot of money
Didn't refer to your partner with a title indicating you were in a committed relationship (e.g., calling them your boyfriend/girlfriend, husband/wife)
Introduced your partner to your family
Told your partner you weren't interested in commitment
Acted moody
Criticized your partner
Asked your partner who they were spending time with
Flirted with others in front of your partner

Table 1. (Continued)

Made promises or commitments to your partner
Was physically abusive to your partner
Was verbally abusive to your partner

Was emotionally abusive to your partner
Suggested changing your relationship to friends with benefits
Told your partner you needed them or depended on them
Made friends with people of your partner's sex
Was secretive with your partner (e.g., wouldn't let them look at your phone, hid information from them)
Kept conversations with your partner to only superficial topics
Kept your finances separate from theirs
Said you loved your partner
Stopped speaking to your partner
Wouldn't make eye contact with your partner
Avoided discussing the future with your partner
Expressed negative views of marriage
Told friends your relationship was not serious
Said negative things about your relationship
Yelled at your partner
Swore at your partner
Told your partner you didn't want a long-term relationship
Talked about other people of your partner's sex in front of them
Made your partner pay for everything
Talked about your exes
Asked your partner for money
Acted needy
Chose your friends or family over your partner
Looked for attention from other people
Was quick to anger with your partner
Nagged your partner
Told your partner intimate details about your life
Said you found other people of your partner's sex attractive
Sought emotional support or comfort from other people
Expected too much of your partner
Intentionally got caught lying to your partner
Told people personal information about your partner

Table 1. (Continued)

Told your partner you wanted to break up
Wore revealing clothing when you were not around your partner
Were lazy

Told friends your wanted to break up with your partner
Acted bored with your partner
Blew things out of proportion
Complained
Questioned your partner's emotions
Spent time alone
Said you were unhappy
Made your partner feel guilty
Spoke negatively about your partner's sexual abilities
Avoided making or buying food for your partner
Compromised with your partner on issues in your relationship
Did nice things for your partner
Did things with your partner that they wanted to do
Told your partner you'd be happier with someone else
Spoke negatively about your relationship to other people
Reciprocated sexual acts (e.g., was fair in bed, gave as well as received, etc.)
Talked with your partner's same-sex friends
Had a best friend of your partner's sex
Said you didn't like your partner's family
Told your partner you had feelings for someone else
Suggested an open relationship
Argued with your partner about unimportant things
Was defensive with your partner
Was jealous
Told your partner why the relationship wasn't working
Suggested breaking up
Told your partner that they could be with someone better
Severed (ended) contact with your partner
Stated going out with someone else
Was seen with other potential partners
Was passive aggressive with your partner
Told your partner you were never attracted to them
Moved away from your partner (to a different residence)
Refused to discuss problems in the relationship

Table 1. *(Continued)*

Complimented your partner
Criticized your partner's appearance
Returned gifts your partner gave you to them

Returned your partner’s belongings to them
During a date, spent a significant amount of time away from your partner
Slept away from your partner (e.g., in a different bed or separate home)
Insulted your partner’s friends or family
Suggested your partner spend time doing things without you
Divided up your mutual friends
Claimed to be a different sexual orientation
Deleted your partner from social media
Accused your partner of not caring
Suggested breaking up during a fight
Attempted to get your partner to break up with you
Used your partner’s past behavior to justify your lack of trust in them
Changed the locks on your house
Went to strip clubs
Complained about money
Attempted to injure or kill your partner
Shamed your partner on social media
Spent time with an ex
Didn’t try to fix things after a fight
Avoided your partner’s sexual advances
Helped care for your partner’s children
Got your friends or family to help you end the relationship
Flirted with your partner’s best friend
Broke your partner’s things
Put effort into your appearance
Made jokes about breaking up
Told other people private things about your relationship
Kept your children away from your partner
Was affectionate with your partner in public
Spread rumors about your partner
Rejected your partner’s affection
Made negative comments about the people your partner was spending time with

The second part of this study was dedicated to determining which behaviors had actually used in participants real break-ups. I computed the mean for each item for participants who initiated the relationship break-up and used the cutoff of “2” to determine which items were candidates for elimination. I retained any item with a mean equal to or greater than 2, indicating it was on average performed more than “rarely” in the context of a break-up. This generated a total of 51 hypothesized mate expulsion tactics (Table 2).

Table 2. Taxonomy of Tactics and Acts of Mate Expulsion

Refused to discuss problems in the relationship.
Did not return your partner’s calls or texts.
Stopped speaking to your partner.
Did not try to fix things after a fight.
Did not call or text your partner.
Avoided serious conversations with your partner.
Avoided spending time with your partner.
Actively avoided your partner.
Cancelled plans you had with your partner.
Excluded your partner from activities.
Spent more time with your friends without your partner.
Avoided going places with your partner.
Ignored your partners feelings or needs.
Was secretive with your partner
Behaved coldly towards your partner.
Kept conversations with your partner to only superficial topics.
Forgot important things about your partner.
Acted bored with your partner.
Avoided doing favors for your partner.
Chose your friends or family over your partner.
Avoided spending money on your partner.
Avoided being physically affectionate with your partner or rejected their affection.

Table 2. *(Continued)*

Less sex
No sex/stop having sex
Less intimacy
Told your partner you wanted to break up.
Suggested breaking up.
Suggested “taking a break” from the relationship.
Told your partner that they could be with someone better
Suggested your partner spends time doing things without you.
Said you were unhappy in the relationship.
Told your partner you needed more time alone.
Was passive aggressive with your partner.
Dropped hints that you wanted to break up.
Looked for attention from people other than your partner.
Checked out other potential partners.
Lied to your partner
Made promises or commitments to your partner.
Accused your partner of not caring.
Talked about other people of your partner’s sex in front of them.
Questioned your partner’s emotions.
Was quick to anger with your partner.
Argued with your partner about unimportant things.
Did not follow through on promises to your partner.
Asked your partner who they were spending time with.
Told your partner you needed them or depended on them.
Acted needy.
Expected too much of your partner.
Made your partner feel guilty.
Criticized your partner.
Yelled at your partner.

Validation

I then presented these 51 items to participants currently in a long-term committed romantic relationship and had them rate the frequency with which they performed each behavior in their current relationship. I had two goals 1) to assess the factor structure and reliability of the mate expulsion items and 2) to examine the correlations between the mate expulsion items and relationship satisfaction and mate retention. I hypothesized that a valid measure of mate expulsion should correlate negatively with relationship satisfaction and mate retention. Individuals who are satisfied in their current, romantic relationship participate more often in mate retention behaviors (Salkicevic, Stanic, Grabovac, 2014; Conroy-Beam et al., 2016). If an individual is not satisfied with the relationship, they may want to leave the relationship and motivated to participate in more expulsion behaviors.

Method

Participants. Study 1 consisted of 290 (Female = 258, M_{age} = 24.16) college students. Participants in the survey reported they were in a committed, romantic relationship and were given .5 points extra credit towards a psychology course for each part completed for a total of 1-point extra credit. Participants who completed Study 1 and passed attention checks were eligible to complete Study 2. Before participants took the survey, they were asked to answer a participant quality check item. They read a passage and answered two questions to assess

if they were paying attention to the study. If they answered either question incorrectly, they were not allowed to participate in the study. The 290 participants passed the quality check and were eligible for part two of this study; however, only 149 (Female: 135, M_{age} = 23.89) participants completed Study 2.

Procedure and Materials. *Study 1* Participants were initially given a passage to read followed by two related questions. If participants answered them correctly, they moved on to complete the study. Study 1 consisted of participants completing the Couple Satisfaction Index-16, which measures relationship satisfaction (CSF-16; Funk & Rogge, 2007). Participants then completed the Mate Retention Inventory- Short Form (MRI-SF; Buss, Shackelford, & McKibben, 2008). This measure has participants report how often they participate in 38 mate retention behaviors. Participants were instructed the following: “On the following pages are listed a series of acts or behaviors. In this study, we are interested in the acts that people perform in the context of their relationship with their romantic partner. For each act, use the following scale to indicate how frequently you performed the act within the past ONE year.” These ratings were on a four-point scale ranging from 0 (*Never performed this act)* to 3 (*Often performed this act*). After completing the survey, participants were thanked for their participation and asked to return to the second part of the study.

Study 2 Data collection for Study 1 took approximately five weeks to collect. Participants that passed attention checks in Study 1 were contacted via email and asked to complete Study 2. Immediately after data collection of Study

1 was completed, data collection began for Study 2. Data was collected separately to avoid participant suspicion of the true nature of the study and avoid any carry over effects by taking both measures simultaneously. Participants rated the 51 hypothesized mate expulsion tactics. Participants were instructed the following: “On the following pages are listed a series of acts and behaviors. In this study, we are interested in the acts that people do and do not perform in the context of their romantic relationship. For each act, use the following scale to indicate how frequently you performed, or in some cases, did not perform the act within the past ONE year.” These ratings were on a four-point scale ranging from 0 (*Never did this)* to 3 (*Often did this*). After completing the survey, participants were briefed and thanked for their participation.

Results and Discussion

Exploratory Factor Analysis A principal axis factor analysis was conducted with a Direct Oblimin rotation (Delta = 0) via SPSS Version 24 on 51 items for a sample of 124 participants. Based on several analyses, a seven-factor extraction is the best solution (Table 3). Factors were initially extracted if eigenvalues were greater than one. This led to an 11-factor extraction, which upon further examination, was not appropriate for the items presented due to items loading onto multiple factors and weak correlations between items and within the factors. I examined factor loadings for 10, 9, and 8 factor solutions; however, items loaded onto various factors suggesting some items were too complex for the nature of the selected factor solutions. Some factor loadings had items that

strongly correlated within a factor and also contained items that weakly correlated (e.g. some items in a factor correlated with ranges between r = .89 and r = .35). For the seven-factor solution, items within each factor contained improved correlations and items within each factor allowed for identification of specific themes. For example, Factor 1 contained items associated with *negative partner-directed behaviors*. This factor includes items such as Criticized your partner, yelled at your partner, and was passive aggressive with your partner. Factor 2 contained items such as suggested breaking up, told your partner why the relationship wasn't working, and told your partner that they could be with someone better. These items are associated with *Indirect/Direct verbal tactics*. Factor 3 contained items such as acted needy, expected too much of your partner, and was quick to anger with your partner. These items may be associated with *testing your partner*. Factor 4 contained items associated with *reduced communication.* Items included stopped speaking to your partner, did not return your partners calls or texts, and did not call or text your partner. Items in factor 5 were associated with *assessing alternative* mates; items included behaviors such as looked for attention from people other than your partner, checked out other potential partners, and was secretive with their partner. Factor 6 contained items associated with *reduced investment* and contained items such as spent more time with your friends without your partner, cancelled plans you had with your partner, and avoided spending time with your partner. Factor 7 contained items associated with *reduced intimacy*. This factor includes items

such as avoided serious conversations with your partner, forgot important things about your partner, and kept conversations with your partner to only superficial topics. Overall, throughout the various factor extractions some items did not load onto factors. This may be due to the small sample size used for the factor analysis. In summary, the seven factor loadings extracted were: *negative partner-directed behaviors, indirect/direct relationship termination, testing your partner, reduced communication, uncertain infidelity, reduced investment, and reduced intimacy* (Table 3).

Table 3. Mate Expulsion Inventory Exploratory Factor Analysis Factory Loadings Pattern Matrix of Seven-Factor Solution on a Principal Factor Analysis Rotation for 51 Items.

	Factor Loadings
Item	Negative partner-directed behaviors
Criticized your partner.	0.719
Swore at your partner.	0.591
Avoided being romantic with your partner.	0.555
Yelled at your partner.	0.513
Made your partner feel guilty.	0.491
Avoided doing favors for your partner.	0.473
Avoided Being physically affectionate with your partner or rejected their affection	0.452

Was passive aggressive with your partner.	0.36	
Acted bored with your partner.	0.307	

	Indirect/Direct relationship termination
Suggested breaking up.	0.95
Told your partner you wanted to break up.	0.929
Suggested “taking a break” from the relationship.	0.795
Dropped hints that you wanted to break up.	0.763
Said you were unhappy in the relationship.	0.657

Told your partner you needed more time alone.	0.637	
Told your partner why the relationship wasn't working.	0.57	
Accused your partner of not caring.	0.447	
Told your partner that they could be with someone better.	0.429	
Did not try to fix things after a fight.	0.25	
		Testing your partner.
Acted needy.		0.726
Told your partner you needed them or depended on them.		0.507

Asked your partner who they were spending time with.	0.447
Expected too much of your partner.	0.445
Questioned your partner's emotions.	0.367
Argued with your partner about unimportant things.	0.352
Was quick to anger with your partner.	0.341
Actively avoided your partner.	-0.27
Made promises or commitments to your partner.	0.36

Reduced communication

Stopped speaking to your partner.	0.781	
Did not call or text your partner.	0.749	
Did not return your partner's calls or texts.	0.677	
Behaved coldly toward your partner.	0.391	
		Uncertain Infidelity
Looked for attention from people other than your partner.		0.89
Checked out other potential partners.		0.839
Was secretive with your partner		0.514
Talked about other people of your partner's sex in front of them.		0.393

	Reduced investment
Chose your friends or family over your partner.	0.667
Avoided going places with your partner.	0.562
Spent more time with your friends without your partner.	0.49
Excluded your partner from activities.	0.437
Avoided spending money on your partner.	0.417
Cancelled plans you had with your partner.	0.403
Did not follow through on promises to your partner.	0.385

Avoided spending time with your partner.	0.341	
Suggested your partner spend time doing things without you.	0.282	
		Reduced Intimacy
Avoided serious conversations with your partner.		0.681
Refused to discuss problems in the relationship.		0.638
Forgot important things about your partner.		0.579
Kept conversations with your partner to only		0.527

superficial topics.	
Ignored your partner's feelings or needs.	0.341
Lied to your partner.	0.253

Scores on the Mate Expulsion Inventory *(*α = .95) were negatively related to relationship satisfaction *(*α = .96*), r* = -.49*.* This suggests that those who are less satisfied with their current relationship may engage in specific behavior that functions to terminate their relationship. Meanwhile, mate retention behaviors and mate expulsion behaviors were weakly correlated, *r* = .19. Although this correlation was in the opposite direction from what I predicted, the low correlation between the two suggests these behaviors are not strongly predictive of one another, supporting the need for a measure of mate expulsion separate from that of mate retention (Table 4).

Table 4. Bivariate Correlations Between Relationship Satisfaction, Mate Retention Behaviors, Mate Expulsion Behaviors and Subscales of Mate Expulsion Inventory.

Scale	CSI Score	MRI Score	MEI Score	Negative partner directed behaviors	Reduced communication	Assessing alternative mates	Indirect/ Direct verbal tactics	Reduced intimacy	Testing Partner
MRI Score	0.10								
MEI Score	-.49**	.22*							
Negative partner directed behaviors	-.41**	.19*	.87**						
Reduced communication	-.31**	.08	.71**	.56**					
Assessing alternative mates	-.38**	.29**	.65**	.49**	.40**				
Indirect/Direct verbal tactics	-.49**	.12	.81**	.63**	.52**	.43**			
Reduced intimacy	-.30**	.11	.67**	.48**	.52**	.39**	.47**		
Testing Partner	-.23**	.38**	.74**	.62**	.45**	.44**	.47**	.47**	
Reduced investment	-.43**	.04	.80**	.64**	.51**	.50**	.47**	.59**	.47*

Note. * = $p < .05$, ** = $p < .01$

Although seven factors were identified as categories of mate expulsion behaviors, they align with the four original categories I had hypothesized. One of the hypothesized categories was *Signaling to the partner a lack of commitment*. The factors indirectly or directly telling your partner you wanted to end the relationship, reduced communication, and reduced intimacy all included tactics that involve signaling a lack of commitment. The *Assessing Alternative Mates* factor directly taps in to *Signaling availability to others*. The tactics in the *Reduced Investment* and *Reduced Intimacy* factors are related to *extracting oneself from shared relationship commitments and investments* and *reducing dependency on one's partner or relationship.* Behaviors in these categories deal with not having specific bonds with partners and these behaviors may isolate the individual from them (Goodfriend & Agnew, 2008; Julien, Chartrand, and Begin, 1999). Only the factor *Testing your partner* did not neatly align with my hypothesized categories. One possibility is that these behaviors function to establish the partner's commitment to their current, less than satisfying, relationship. This would also explain why this factor was the most strongly correlated with mate retention. Testing partner behavior may occur when a person is not-yet fully divested from their relationship and is assessing whether or not the relationship can be improved. If the partner is not responsive to the "testing" behavior, these may cue to the individual that their partner is not entirely invested in the relationship and proceed to exit or mate expulse. Although there is overlap of the seven factors onto the four hypothesized categories of mate

expulsion behaviors, the seven factors indicate more specific taxonomies of mate expulsion behaviors. It could be that these seven clusters identify specific behaviors that help in unique ways to get rid of one's partner, each associated with managing different costs Buss and colleagues (2017) have discussed. However, these data should be looked at with caution due to the limitations of the study. First, the study is a female-biased sample and specific behaviors may be relative to only women (an additional study was conducted to examine if any new behaviors showed up from a male-only sample, see Appendix B. Second, the sample utilized for the factor analysis was relatively small- usually adequate factor analyses require a larger sample size. Therefore, I complete the following study to address these limitations.

CHAPTER THREE

PRESENT STUDY

The overall goal of the present study was to establish an inventory of mate expulsion behaviors, as well as estimate the inventory's reliability and validity. Utilizing the aforementioned studies, I conducted a confirmatory factor analysis to test a seven-factor model previously identified by the exploratory factor analysis. The Mate Expulsion Inventory was also examined for its relationship with relationship satisfaction (CSI-16) and mate retention (MRI-SF). I had predicted that mate expulsion behaviors would be negatively correlated with relationship satisfaction and mate retention behaviors. In other words, if individuals are less satisfied in their relationship, they may participate in more mate expulsion behaviors. Additionally, if individuals are participating in mate expulsion behaviors, they would participate less in mate retention behaviors. If an individual were participating in mate expulsion behaviors, the goal would be relationship termination and not relationship maintenance, therefore, individuals would participate in less mate retention behaviors.

Participants were presented with a relationship satisfaction measure, the Mate Retention Inventory Short-Form (Buss, Shackelford, and McKibben, 2008), and my Mate Expulsion Inventory. The relationship satisfaction measure asked participants about their satisfaction within the relationship. The Mate Retention Inventory asks participants how often they participated in mate retention

behaviors. Lastly, the Mate Expulsion Inventory asks participants how often they participated in mate expulsion behaviors.

Method

Data Screening

I implemented several attention checks and response quality items to the study to identify low-quality data and careless responding. Four instructional items were included: two in the Mate Retention Inventory and two in the Mate Expulsion Inventory. These items instructed participants to select an instructed response such as, “Please indicate never for this option.” Correct responses were given a score of 0, indicating the attention check was not missed, while incorrect responses were given a score of 1 indicating a miss. I summed these scores to assess total attention checks missed. One missed attention check as a criterion for low-quality data or careless responding seemed too conservative, considering the number of items in the survey (approximately 120 + items), therefore, only participants who missed at least two responses were considered as potentially low-quality data or careless responding and excluded from the final analysis. DeSimone and Harms (2018) provided four self-report items and cutoffs to indicate low quality data. I included these self-report items at the end of the study to question participants’ responses. Specifically, the frequency to which they responded to questions honestly, were thoughtful in survey responses, responded without carefully reading the items (reverse-coded), and provided little

effort when answering items (reverse-coded). Each item was rated on a five-point scale ranging from 1 (*very rarely*) to 5 (*very often*). Lower scores indicated potential low-quality data. Participants with an average score below 4.0 were flagged as potential low-quality data; an average score of at least 4.0 indicated the participant responded thoughtfully and effortfully "often." Anything below would have indicated they responded effortfully and carefully only "somewhat." Ultimately, if the participant had a below average score of 4.0, they were considered as low-quality data and, upon examination, possibly excluded from the final analysis. I took response time into consideration when screening for low quality data. I averaged the amount of time it took participants to complete the survey, individuals with abnormally fast survey completions or ±3 standard deviations away from the mean were examined carefully for potential low-quality data. If participants' time to complete the survey seemed unreasonable, they were excluded from the survey. Lastly, I looked for potential multivariate outliers. Multivariate outliers may identify inconsistent/dishonest responding and participants were carefully examined for low quality data. If statistical multivariate outliers were identified, the analysis was conducted with the multivariate outliers included and excluded from the final analysis to identify any significant changes in analyses.

Participants

I recruited participants using the TurkPrime Data Acquisition Platform (TurkPrime), a website that assists researchers in creating studies to host on

Amazon's Mechanical Turk (Litman, Robinson, & Abberbock, 2017). Participants self-identified as currently being in an exclusive romantic relationship, domestic partnership, or married, from the United States, and were provided an incentive of USD $1.00. Several steps were taken to asses data quality (see "Data Screening" section). Sixty-eight participants failed at least two attention checks and excluded from the analysis (13%). When participants were asked to rate the quality of their responses, 31 participants had an average equal to or less than 3.67 and upon further examination were excluded from the analysis (these participants had at least two responses indicating they responded effortfully and carefully "somewhat", 6%). Nineteen participants had an average score between 3.68 and 3.99. These participants indicated at least once they were not carefully or effortfully responding in one way but indicated overall greater quality in responding on other items. These participants were not excluded from the final analysis. There were seven potential multivariate outliers found by examining the Mahalanobis Distances between all measure scores (i.e. Commitment Satisfaction Index-16, Mate Retention Inventory Short-Form, and the Mate Expulsion Inventory). After further examination, only one was excluded due to the amount of time this participant took to complete the study. On average, the study was completed within 17 minutes, while this participant completed the study in under 5 minutes. The other multivariate outliers were not concerning and kept for the final analysis. Lastly, nine participants had missing data and were therefore excluded from the final analysis as confirmatory factor analyses automatically

excludes missing cases. Participants excluded still received the incentive. In total, 410 participants (263 female) completed the study after data screening and ranged in age from 20 to 80 (*M* = 45.49, *SD* = 15.35).

Materials

Participants read a consent form prior to completing the study and completed the same measures as participants in the previous study: The Commitment Satisfaction Index-16, the Mate Retention Inventory Short-Form, the Mate Expulsion Inventory, and demographic questions. The Couple Satisfaction Index-16 is a measure of relationship satisfaction, the MRI-SF is a self-report measure of how often individuals participate in 38 mate retention behaviors, and the MEI is a self-report measure of how often individuals participate in 51 mate expulsion behaviors. I added eight additional behaviors that had been excluded when I reduced the list of items from the original 168 to 51. These behaviors were: "*withholding sex*," "*less sex*," "*less intimacy*," "*flirted with someone other than your partner*," "*Romantically kissed someone other than your partner*," "*Had sexual contact with someone other than your partner,*" "*Avoided spending time with your partner's family*" and "*Avoided spending time with your partner's friends.*" I included them because, theoretically, they may be important to include in an assessment of mate expulsion. Additionally, these items were close to the criterion cut off used to eliminate items and reconsidered for the inventory. Although these items may not have met the cut off, they might be very impactful behaviors and kept in the inventory. Participants then answered demographic

questions (i.e. sex, sexual orientation, age, and date in which their current relationship began). After completing the survey, participants were debriefed and thanked for their participation

Procedure

Participants first read the consent form of the study. After the consent form participants were then presented with the Couple Satisfaction Index-16. Participants then completed the MRI-SF and the MEI in a randomized order. Items within each measure were also presented in a randomized order. Then, participants completed the demographics questions, questions regarding the participant's quality of responses, and read a debriefing statement.

Assumptions

There are different assumptions that are assessed prior to running a confirmatory factor analysis. Meeting assumptions increases the robustness of the analysis. A sufficient sample size was met (N = 410). There is not an established rule of thumb for appropriate sample sizes for confirmatory factor analyses- sources have stated a minimum of 200 participants while others a minimum ratio of five participants per item (Carpenter, 2018). My sample size exceeded both of these minima. There were seven multivariate outliers, causing a positively skewed distribution. I examined the results both including and excluding these outliers and there were no significant differences.

Results

I conducted my statistical analyses using IBM SPSS Statistics Version 24 and *R*, a language and environment for statistical computing and graphics. I tested correlation hypotheses, sex differences, specific assumptions and reliability analyses in SPSS and the confirmatory factor analysis in R utilizing the lavaan package (Rosseel, 2012). The lavaan package allows users to estimate a wide array of multivariate statistical methods, such as path analysis, confirmatory factor analysis, and structural equation modeling.

For my confirmatory factor analysis, I hypothesized a seven-factor model of *Negative Partner Directed Behaviors, Indirect/Direct Relationship Termination, Testing Partner, Reduced Communication, Assessing Alternative Mates, Reduced Investment,* and *Reduced Intimacy*. Through this process, I expected items to not load onto specific factors and allowed for items to be excluded from the final inventory.

Model Estimation. Results suggest the model was acceptable but not excellent, χ^2 (139, N = 410) = 5025.998, p < .001, Root Mean Square Error of Approximation (RMSEA) = .071; 90% CIs [.069, .074], comparative fit index (CFI) = .753, Standardized Root Mean Square Residual (SRMR) = .080. The model was an acceptable fit for some fit indices but not others, therefore, post hoc model modifications were performed in an attempt to develop a better fitting, parsimonious model. This consisted of removing potential items from the inventory and/or adjusting the factor structure (Table 5)

I took several approaches to improve the model. First, factors previously established by the EFA were combined together based on specific characteristics. The seven factors were specified into three different factors related to: *Affect, Behavior,* or *Cognition*. I then hypothesized a new model following this three-factor structure where items in *Negative Partner Directed Behaviors, Assessing Alternative Partners,* and *Reduced Intimacy* were combined into the *Behavior* factor, items in the *Testing Partner* and *Reduced Investment* were combined into the *Affect* factor, and items in the *Reduced Communication* and *Indirect/Direct Relationship Termination* were combined into the *Cognitive* factor. The model did not improve measures of fit, χ^2 (121, N = 410) = 5855.914, p < .001, RMSEA = .079; 90% CIs [.077, .081], CFI = .695, SRMR = .075.

The next approach to improve the model was to remove items from the inventory. I removed items based on mean ratings per item. The mean ratings

ranged from .11 to 1.70 (Score range of 0 to 3, 0 indicating “Never” and 3 indicating “Often”). I removed items from the inventory for the model if items averaged close to “0” scores. This indicated, on average, participants never participated in that behavior. I removed the items: “Had sexual contact with someone other than their partner” (*M* = .14), “Told your partner you wanted to break up” (*M* = .28), “Suggested breaking up with your partner” (*M* = .32), “Suggested ‘taking a break’ from the relationship” (*M* = ..25), “Dropped hints to break up” (*M* = .26), “Check out other alternative partners” (*M* = .23), “Romantically kissed someone other than your partner” (*M* = .11), “Flirted with someone other than your partner” (*M* = .31), “Talked about other people of your partner’s sex in front of them” (*M* = .30),” and “Told your partner that they could be with someone better (*M* = .37).” I considered these items, on average, to never be done within the context of the relationship. After I removed these items, the Assessed Alternative Mates factor was left with only two items which made it difficult to define the factor. Therefore, the remaining two items were incorporated into the *Reduced Communication* factor. The model slightly improved, χ^2 (113, N = 410) = 3569.9527, p < .001, RMSEA = .074; 90% CIs [.071, .076], CFI = .772, SRMR = .074. Overall, the hypothesized model remained acceptable, but not excellent.

Table 5. Mate Expulsion Inventory Confirmatory Factor Analysis Factor Loading Estimations for a Seven-Factor Model for 59 Items.

Item	Factor Loadings						
	Negative Directed Behaviors	Indirect/Direct Relationship Termination	Testing your Partner	Reduced Communication	Assessed alternative mates	Reduced investment	Reduced intimacy
Criticized your partner.	0.67						
Swore at your partner.	0.67						
Avoided being physically affectionate.	0.72						
Yelled at your partner.	0.71						
Made your partner feel guilty.	0.64						
Avoided doing favors.	0.62						
Was passive aggressive.	0.69						
Acted bored with your partner.	0.65						
Suggested breaking up.		0.85					
Told your partner you wanted to break up.		0.79					

Told your partner why the relationship wasn't working.	0.83	
Accused your partner of not caring.	0.72	
Said you were unhappy in the relationship.	0.83	
Suggested "taking a break" from the relationship.	0.72	
Dropped hints that you wanted to break up.	0.77	
Told your partner you needed more time alone.	0.51	
Told your partner that they could be with someone better.	0.44	
Did not try to fix things after fight.	0.51	
Acted needy.		0.44
Told your partner you needed them or depended on them.		0.19

Asked your partner who they were spending time with.	0.45	
Expected too much of your partner.	0.57	
Questioned your partner's emotions.	0.7	
Argued with your partner about unimportant things.	0.7	
Was quick to anger with your partner.	0.77	
Actively avoided your partner.	0.62	
Made promises or commitments to your partner.	0.14	
Stopped speaking to your partner.		0.66
Did not call or text your partner.		0.61
Did not return your partner's calls or texts.		0.63
Behaved coldly toward your partner.		0.79

Flirted with someone other than your partner.	0.793	
Had sexual contact with someone other than your partner.	0.68	
Romantically kissed someone other than your partner.	0.67	
Looked for attention from people other than your partner.	0.74	
Checked out other potential partners.	0.77	
Was secretive with your partner	0.57	
Talked about other people of your partner's sex in front of them.	0.36	
Avoided spending time with your partner's family.		0.48
Avoided spending time with your partner's friends.		0.46
Chose your friends or family over your partner.		0.66

Avoided going places with your partner.	0.71	
Spent more time with your friends without your partner.	0.54	
Excluded your partner from activities.	0.66	
Avoided spending time with your partner.	0.78	
Avoided spending money on your partner.	0.59	
Cancelled plans you had with your partner.	0.55	
Did not follow through on promises to your partner.	0.4	
Suggested your partner spend time doing things without you.	0.53	
Avoided having sex with your partner.		0.79
Engaged in less sex with your partner.		0.74
Witheld sex from your partner.		0.77

Avoided serious conversations with your partner.	0.65
Refused to discuss problems in the relationship.	0.58
Forgot important things about your partner.	0.4
Kept conversations with your partner to only superficial topics.	0.62
Ignored your partner’s feelings or needs.	0.66
Lied to your partner.	0.58
Avoided being romantic with your partner.	0.79

Bivariate Correlations. I conducted bivariate correlations between the Mate Expulsion Inventory and the Relationship Satisfaction Index and bivariate correlations between the Mate Expulsion Inventory and the Mate Retention Inventory Short-Form. Scores for each measure were summed accordingly and analyzed. The MEI exceeded the minimum coefficient for reliability (α = .65), α = .96. The MRI-SF and the CSI-16 exceeded minimum coefficients for reliability as well, α = .91 and α = .96, respectfully. The MEI was negatively correlated with relationship satisfaction, $r(410) = -.61$, $p < .01$. This suggests that individuals that participate in more mate expulsion behaviors may be less satisfied in their relationships. The MEI, however, was positively correlated with the MRI $r(410) = .20$, $p < .01$. This suggests that individuals participating in mate expulsion behaviors may also be participating in mate retention behaviors. Both of these correlations were similar in magnitude and direction to the correlations between these measures I found in the previous study (Table 6).

Table 6. Bivariate Correlations Between Relationship Satisfaction, Mate Retention Behaviors, Mate Expulsion Behaviors and Subscales of Mate Expulsion Inventory.

Scale	CSI Score	MRI Score	MEI Score	Negative partner directed behaviors	Reduced communication	Assessing alternative mates	Indirect/Direct verbal tactics	Reduced intimacy	Testing Partner
MRI Score	.18**								
MEI Score	-.61**	.27**							
Negative partner directed behaviors	-.59**	.23**	.91**						
Reduced communication	-.52**	.19**	.84**	.76**					
Assessing alternative mates	-.40**	.28**	.72**	.54**	.52**				
Indirect/Direct verbal tactics	-.54**	.27**	.86**	.78**	.72**	.55**			
Reduced intimacy	-.61**	.06	.88**	.76**	.73**	.64**	.68**		
Testing Partner	-.36**	.44**	.79**	.74**	.61**	.49**	.65**	.54**	
Reduced investment	-.53**	.14**	.86**	.71**	.71**	.64**	.64**	.78**	.58**

Note. * = $p < .05$, ** = $p < .01$

Sex Differences. I conducted t-tests to examine differences in the types of mate expulsion behaviors used between men and women (Men = 0, Women = 1). This was an exploratory analysis as I had no *a priori* hypotheses. I calculated the mean for each subscale of the inventory to examine differences between men and women. There were no significant differences between men and women in behaviors associated with reduced communication, assessing alternative mates, and reducing investment (Table 7). There were significant differences between men and women in behaviors associated with negative partner directed behaviors, indirect/direct relationship termination, testing their partner, and reduced intimacy. Women reported participating in behaviors in each of these domains more than men (Table 7).

Table 7. Sex Differences Between the Average Usage of Different Mate Expulsion Behaviors.

	Men		Women		
	M	SD	M	SD	*t*
Negative partner directed behaviors	.64	.53	.81	.65	-2.75**
Indirect/Direct verbal tactics	.33	.42	.50	.59	-3.10**
Testing partner	.88	.54	1.03	.57	-2.60*
Reduced communication	.51	.49	.59	.64	-1.22
Assessing Alternative mates	.27	.41	.27	.44	0.07
Reduced investment	.45	.53	.5	.51	-1.03
Reduced intimacy	.49	.49	.63	.62	-2.40*

Note. * = p < .05, ** = p < .01

Discussion

The inventory is a reliable and valid measure of mate expulsion behavior and psychology. Although valid and reliable, the hypothesized model consisting of seven factors was not a good fit. The psychology of mate retention has been well established in the evolutionary psychology literature, but less attention has been given to the psychology of relationship termination. The present study has taken a step in identifying such behaviors and contributed an inventory set to measure mate expulsion psychology. I could have conducted several modifications to improve the model, but I only used optimal modifications. There could be several reasons why the initial model was not a good fit. One specific reason was the small sample size in the exploratory factor analysis. A total N of 124 was utilized for a 50 plus item inventory, a sample size of at least 200 is recommended for a robust analysis (depending on source). A different approach would be to utilize this recently collected sample size to conduct an exploratory factor analysis. This sample size may provide for a more robust analysis. Following the exploratory factor analysis, a new sample size would be recollected to confirm the new model.

In an attempt to improve the model, I grouped the seven factors into three separate factors and tested this new hypothesized model. This did not improve the model fit and may suggest the items in these new clusters are not good

measures of the latent variables. In a different attempt to improve the model, I deleted items. I deleted items: 1) to reduce the number of items to be included in the final inventory and 2) to potentially improve the model fit. My decision rules to delete items were based on the average frequency of a behavior or poor factor loadings within the model. The model improved slightly, suggesting some of the items may be similar in theme and share similar variance, there may be less than seven latent variables explaining mate expulsion, and the variance may be explained more by other items. Regardless, this was an initial attempt in developing a measure of mate expulsion and an attempt at tapping into a side of mating psychology that has received little to no attention.

Ultimately, the seven-factor solution was downsized to a six-factor solution. This happened after the removal of several items for low average frequencies. The behaviors removed are stated in the results section that tests the hypothesized model with the removal of items. Once I removed these items, the factor *Assessed alternative mates* only retained two items. It is usually difficult to measure a latent variable with just two items; therefore, the two items ("Was secretive with partner" and "looked for attention in other people besides your partner") were relocated to the *Reduced communication* factor. The final number of behaviors in the Mate Expulsion Inventory is 49 items.

Although the hypothesized model was not an excellent fit, items were still able to load on to each factor accordingly. Almost all factors were retained except for one and these themed behaviors are still associated with the originally

hypothesized clusters. Some of the items removed were associated with explicitly telling their partner they wanted to end the relationship (i.e. “suggested breaking up, suggested to ‘take a break’”) and behaviors of infidelity (i.e. “romantically kissed someone other than their partner, flirted with someone other than your partner”). These behaviors may add evidence to suggest that mate expulsion behaviors may not consist of behaviors that immediately lead to relationship termination. It is hypothesized that mate expulsion psychology would pick up on cues of a potential costly partner, which may motivate an individual to exit the relationship by participating in behaviors that would limit the costs of leaving. The behaviors removed from the inventory may be perceived as too costly and in turn are rarely used. Similarly, some of the items removed were explicit ways to terminate the relationship and made up half of the factor related to *indirect/direct relationship termination* which could suggest explicit means of breaking up are not an effective strategy utilized for effect mate expulsion.

Lastly, the originally hypothesized clusters are still found within these six factors. The *signaling lack of commitment* cluster is captured by the factors of *indirect/direct relationship termination, reduced communication, and reduced intimacy.* These findings provide further evidence to suggest relationship termination consists of behaviors that let their partner know they are potentially losing interest and make the transition of exiting the relationship easier, which has also been found in studies regarding reduction in affection which have led to relationship termination (Gottman & Notarius, 2000). *Signaling availability to*

others is now captured by *the reduced communication* factor. If they are communicating less with their partner and begin showing this lack of communication, it may signal to others that they do not have a romantic partner. Some behaviors within this factor also consist of “flirting with others” or “being secretive with partner” which may also signal to others their availability. This may be used as a way retain back up mates as this study provides evidence suggesting individuals participate in these behaviors (Buss et. al, 2017). E*xtracting oneself from shared relationship and investments* and *reducing one’s dependency on one’s partner or relationship* are captured by *reduced investment* and *intimacy. Testing your partner* still remains as an interesting factor as it was not hypothesized in the original clusters and still maintained strong factor loadings. Items in the *testing partner* factor may be self-directed- in other words the individual participate in these behaviors and become reason why the relationship is not working, potentially leading to the relationship ending. This may also suggest that mating psychology may consist of behaviors that motivate individuals to terminate their relationship and function to assess a potentially costly partner.

Although the current model of the inventory per the confirmatory factor analysis was not perfect, there is still validity to the inventory as a measure of mate expulsion psychology. Evidence for the measure’s validity involves the negative correlation between the Mate Expulsion Inventory (MEI) and the relationship satisfaction measure. If individuals are less satisfied in their

relationship, they would participate in more mate expulsion behaviors. Similarly, if individuals are more satisfied in their relationship, they would participate in less mate expulsion behaviors. This is consistent with the literature examining various predictors of relationship dissolution which include relationship satisfaction and stability (Simpson, 1987; O'connor, Pickering, Dunn, & Golding, 1999; Hendrick, Hendrick, & Adler 1988). Researchers have hypothesized that relationship satisfaction functions to motivate relationship maintenance behavior when someone has a fitness beneficial partner (Conroy-Beam et al. 2016). My results extend existing work relating relationship satisfaction to behavioral outcomes by demonstrating that low relationship satisfaction predicts more mate expulsion behavior in addition to less mate retention behavior.

The MEI and Mate Retention Inventory (MRI) were weakly, positively correlated. This indicates these measures are slightly related to one another, more importantly, it demonstrates that they explain unique variance in mating psychology. Participating in mate retention behaviors may suggest the individual is invested in the relationship, while mate expulsion behaviors may suggest an individual is not benefiting from the relationship anymore but could be trying to reestablish the relationship as beneficial. If this is not established within a given timeframe individuals may then result in implementing more mate expulsion behaviors and less mate retention behavior accordingly to exit the relationship. The small positive correlation between mate retention and expulsion could be a product of early stages of relationship dissatisfaction when a person is attempting

to determine if they should stay or leave. Longitudinal studies that track mate retention and mate expulsion behavior could determine if and how the association between these varies as relationships dissolve.

There were varying sex differences in the usage of specific behaviors as well. On average, women participated in more behaviors associated with negative partner directed behaviors, indirect/direct verbal tactics, testing their partner, and reducing intimacy than men did. These sex differences have not been examined in the literature and are the first to be noted. Women may participate more in indirect/direct relationship termination to make quick decisions for relationship termination or to slowly extract themselves from the relationship with subtle clues suggesting they may be unsure of the investment their partner may have. Women may be testing their partner as a strategy to assess their investment in the relationship. Men prone to infidelity would be a costly partner for women and behaviors testing their investment would provide cues to a possible exit strategy from the relationship. Lastly, women may use behaviors to reduce intimacy as a way to signal to men less access to reproduce. This may then increase moments of infidelity. It has been found that men and women cheat for different reasons. Men tend to cheat in the form of opportunity, while women tend to cheat to select a better potential long-term partner (Brand, Markey, & Mills, 2007). This would function as a means of protecting one's reputation by being the victim of infidelity.

In addition, men and women did not differ in their usage of mate expulsion behaviors associated with reducing communication, reducing investment, or assessing alternative mates. It seems that if men and women were not interested in maintaining their partners they would, on average, participate in behaviors to reduce communication, reduce investment, and assess alternative mates approximately the same.

Future Directions

Scale development is a lengthy, rigorous process that requires significant testing. The work in the present thesis represents a first step towards developing a measure of mate expulsion. Future research should look to further test the validity and reliability of the inventory. In this study, the validity of this measure was tested by examining its relationship with relationship satisfaction and mate retention. Conceptual models have been hypothesized for relationship dissolution in other contexts and have found that satisfaction level, quality of alternatives (partners), and investment size results in varying levels of commitment (Hocutt, 1998). The combination of all these various factors may result in less commitment and ultimately relationship termination. Similarly, examining discrepancies in mate value between partners, individual mate value, and potential costs associated with leaving a relationship may provide different predictions in behaviors implemented to get out of a relationship (Buss et al., 2017). This inventory should also be tested amongst populations of recent divorcees and individuals whom recently experienced a break-up as there could

be an increase in more recent and frequent participation of mate expulsion behaviors. Additionally, individuals seeking help within their relationship can be used as a predictor of relationship termination and perhaps an increase in frequency of mate expulsion behaviors. Individuals currently in a romantic relationship may not be in a position to get rid of their partner and therefore, less frequent in their participation of mate expulsion behaviors. Buss et al. (2017) discuss various inputs in which individuals monitor to promote relationship termination. Future research should examine the inputs and contexts in which utilizing these behaviors would be most optimal.

Lastly, future research should look at this measure being parallel to the Mate Retention Inventory. The MRI has been tested extensively for reliability and validity and the MEI should be tested just as rigorously (Shackelford, Goetz, Buss, 2005; Goetz et al., 2005). The factor structure should be tested cross culturally for validity, reliability and to examine sex differences between items, similarly done to the MRI and MRI-SF (Atari, Barbaro, Shackelford, & Chegeni, 2017; Chaudhary, Al-Shawaf, & Buss, 2018; Lopes et al., 2016). This inventory still consists of many items that can be subject to removal- future research should look to make it more concise and implement similar approaches made for the MRI-SF (Buss, Shackelford, & McKibben, 2008). Some of the research in mate retention examined mate retention behaviors that were cost-inflicting or benefit provisioning (Miner, 2009). Future research may look at similar typologies within the inventory such as behaviors that are low versus high risk.

Limitations

There are potential limitations to consider regarding these results. For one, this is not a finalized scale and it should be further tested for its validity and reliability as a measure of mate expulsion. This study highlights a potential measure for mate expulsion psychology and by no means is perfect. Additionally, when interpreting these findings, the majority of people in this sample are reflective of those who are happy in their relationships. When the means were examined for the frequency in the behaviors utilized many fell below 1 (*rarely did this*) indicating individuals rarely participated in these behaviors and the majority of the individuals in this sample had above average relationship satisfaction scores. Similarly, low frequencies for behaviors regarding direct tactics of relationship termination may be indicative of individuals who were unhappier in their relationship compared to others. Future research should address this limitation by collecting from a sample of individuals who are going through a potential break, recently ended their relationship, or currently unhappy in their relationship. This should yield similar results reflective of the results of the present study.

Conclusion

Overall, these results suggest human mating psychology includes mechanisms that function to terminate relationships as well as mechanisms that function to maintain relationships. Findings also provide evidence for the mate

switching hypothesis which suggests specific cues in relationships may signal decisions to end or maintain their current, romantic relationship (Buss et al., 2017). This study provided a new measure of mate expulsion to be used in future research. There are measures used to examine mate retention behaviors, however, these measures do not identify behaviors associated with commitment reduction or relationship termination. When relationships end it is predicted that they occur not because there is a lack of investment from an individual but instead individuals are participating in behaviors that lead to relationship termination.

APPENDIX A

MEASUREMENTS

Couples Satisfaction Index (CSI-16)
(Funk & Rogge, 2007)

Please indicate the degree of happiness, all things considered, of your relationship.

Extremely Unhappy	Fairly Unhappy	A Little Unhappy	Happy	Very Happy	Extremely Happy	Perfect
0	**1**	**2**	**3**	**4**	**5**	**6**

	All the time	Most of the time	More often than not	Occa-sionally	Rarely	Never
In general, how often do you think that things between you and your partner are going well?	5	4	3	2	1	0

	Not at all TRUE	A little TRUE	Some-what TRUE	Mostly TRUE	Almost Completely TRUE	Completely TRUE
Our relationship is strong	0	1	2	3	4	5
My relationship with my partner makes me happy	0	1	2	3	4	5
I have a warm and comfortable relationship with my partner	0	1	2	3	4	5
I really feel like **<u>part of a team</u>** with my partner	0	1	2	3	4	5

	Not at all	A little	Some-what	Mostly	Almost Completely	Completely
How rewarding is your relationship with your partner?	0	1	2	3	4	5

How well does your partner meet your needs?	0	1	2	3	4	5
To what extent has your relationship met your original expectations?	0	1	2	3	4	5
In general, how satisfied are you with your relationship?	0	1	2	3	4	5

For each of the following items, select the answer that best describes *how you feel about your relationship*. Base your responses on your first impressions and immediate feelings about the item.

INTERESTING	5	4	3	2	1	0	BORING
BAD	0	1	2	3	4	5	GOOD
FULL	5	4	3	2	1	0	EMPTY
STURDY	5	4	3	2	1	0	FRAGILE
DISCOURAGING	0	1	2	3	4	5	HOPEFUL
ENJOYABLE	5	4	3	2	1	0	MISERABLE

Mate Retention Inventory Short Form (MRI-SF)
(Buss, Shackelford, & McKibbin, 2008)

Instructions: On the following pages are listed a series of acts or behaviors. In this study, we are interested in the acts that people perform in the context of their relationship with their romantic partner. For each act, use the following scale to indicate how frequently *you* performed the act *within the past ONE year*:

0 = *Never* performed this act
1 = *Rarely* performed this act
2 = *Sometimes* performed this act
3 = *Often* performed this act

Please write in the blank to the left of each item the number that best represents how frequently you performed the act *within the past ONE year*. For example, if you *never* performed the act within the past one year, write a ‘‘0’’ in the blank to the left of the item.

___1. Called to make sure my partner was where they said they would be.
___2. Did not take my partner to a party where other members of the opposite sex as partner would be present.
___3. Insisted that my partner spend all their free time with me.
___4. Talked to another person of the opposite sex at a party to make my partner jealous.
___5. Became angry when my partner flirted too much.
___6. Pleaded that I could not live without my partner.
___7. Told my partner that we needed a total commitment to each other.
___8. Pointed out to my partner the flaws of another member of the opposite sex as my partner.
___9. Bought my partner an expensive gift.
___10. Performed sexual favors to keep my partner around.
___11. Made myself “extra attractive” for my partner.
___12. Complimented my partner on their appearance.
___13. Gave in to my partner’s every wish.
___14. Told my same-sex friends how much my partner and I were in love.
___15. Put my arm around my partner in front of others.

___16. Asked my partner to wear my ring.
___17. Told other members of the same-sex that my partner was a pain.
___18. Stared coldly at an individual who was looking at my partner.
___19. Got my friends to beat up someone who was interested in my partner.
___20. Snooped through my partner's personal belongings.
___21. Took my partner away from a gathering where other members of the opposite sex as my partner were around.
___22. Spent all my free time with my partner so that they could not meet anyone else.
___23. Showed interest in another person of the opposite sex to make my partner angry.
___24. Threatened to break-up if my partner ever cheated on me.
___25. Told my partner that I was dependent on my partner.
___26. Asked my partner to marry me.
___27. Told my partner that another same sex individual as I was stupid.
___28. Took my partner out to a nice restaurant.
___29. Had a physical relationship with my partner to deepen our bond.
___30. Made sure that I looked nice for my partner.
___31. Displayed greater affection for my partner.
___32. Went along with everything my partner said.
___33. Bragged about my partner to other members of the same sex as me.
___34. Held my partner's hand while other same sex members as I were around.
___35. Gave my partner jewelry to signify that they were taken.
___36. Told other members as the same sex as I that my partner was not a nice person.
___37. Gave an individual a dirty look when they looked at my partner.
___38. Slapped an individual who made a pass at my partner.

Mate Expulsion Inventory (MEI)
I developed this measure.

Instructions: On the following pages are listed a series of acts and behaviors. In this study, we are interested in the acts that people do and do not perform in the context of their romantic
relationship. For each act, use the following scale to indicate how frequently you performed, or in some cases, did not perform the act within the past ONE year:

0 = Never did this
1 = Rarely did this
2 = Sometimes did this
3 = Often did this

Please select the response that best represents how frequently you performed or did not perform,
the act within the past ONE year. For example, if you never did this act within the past one year,
select "Never".

__1. Did not try to fix things after a fight.
__2. Lied to your partner.
__3. Was secretive with your partner (e.g., wouldn't let them look at your phone, hid information
from them, any other secretive action).
__4. Refused to discuss problems in the relationship.
__5. Did not return your partner calls or texts.
__6. Stopped speaking to your partner.
__7. Did not call or text your partner.
__8. Suggested your partner spend time doing things without you.
__9. Avoided serious conversations with your partner.
__10. Ignored your partner's feelings or needs.
__11. Behaved coldly toward your partner.
__12. Acted bored with your partner.
__13. Avoided being physically affectionate with your partner or rejected their affection (e.g.,

wouldn't hug them, hold hands, kiss etc.).
__14. Kept conversations with your partner to only superficial topics.
__15. Forgot important things about your partner.
__16. Avoided doing favors for your partner.
__17. Made promises or commitments to your partner.
__18. Avoided spending time with your partner.
__19. Cancelled plans you had with your partner.
__20. Excluded your partner from activities.
__21. Actively avoided your partner.
__22. Avoided spending money on your partner.
__23. Chose your friends or family over your partner.
__24. Spent more time with your friends without your partner.
__25. Avoided going places with your partner.
__26. Avoided being romantic with your partner.
__27. Told your partner why the relationship wasn't working.
__28. Said you were unhappy in the relationship.
__29. Accused your partner of not caring.
__30. Told your partner you wanted to break up.
__31. Suggested breaking up.
__32. Suggested "taking a break" from the relationship.
__33. Told your partner you needed more time alone.
__34. Was passive aggressive with your partner.
__35. Dropped hints that you wanted to break up.
__36. Talked about other people of your partner's sex in front of them.
__37. Told your partner that they could be with someone better.
__38. Looked for attention from people other than your partner.
__39. Checked out other potential partners.
__40. Questioned your partner's emotions.
__41. Was quick to anger with your partner.
__42. Argued with your partner about unimportant things.
__43. Did not follow through on promises to your partner.

__44. Asked your partner who they were spending time with.
__45. Told your partner you needed them or depended on them.
__46. Acted needy.
__47. Expected too much of your partner.
__48. Made your partner feel guilty.
__49. Swore at your partner.
__50. Criticized your partner.
__51. Yelled at your partner.
__52.Less intimacy
__53. Less Sex
__54. No sex/stop having sex

APPENDIX B

ACT NOMINATION (MEN) STUDY

Following the exploratory factor analysis, I collected another sample consisting of only men to nominate potential mate expulsion behaviors. Considering the original act nomination was heavily female biased, I wanted to see if other behaviors showed up that were not initially mentioned.

Method

Participants. The act nomination sample consisted of 47 male participants from TurkPrime (see *Participants* section of *Present Study*). Participants were provided an incentive of USD $0.50. Participants that indicated they were male were kept in the analysis.

Procedure and Materials. Participants were asked to nominate five behaviors that men use to reduce commitment, five behaviors that women use to reduce commitment, five behaviors men use to terminate a romantic relationship, and five behaviors men use to terminate a romantic relationship. I asked participants the same items from the original act nomination as I was interested in the perspective males had on possible behaviors associated with relationship termination and commitment reduction.

Results and Discussion

After the act nomination procedure, items were combined and eliminated due to repetitive or nonsensical responses. I went through the list of behaviors and found 6 items appeared more often within this sample. These included the items: “no sex, less sex, withheld sex, avoided spending time with your partner’s family and avoided spending time with your partner’s friends.”

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL FORMS

Study 1- IRB Approval

Human Subjects Review Board
Department of Psychology
California State University,
San Bernardino

PI: Goetz, Fortini and Kaur

From: Michael R. Lewin

Project Title: Behavioral acts to reduce commitment and terminate long-term relationships

Project ID: H-15SU-07

Date: 9/21/15

Disposition: Administrative Review

Your IRB proposal is approved. This approval is valid until 9/21/16.

Good luck with your research!

Michael R. Lewin, Co-Chair
Psychology IRB Sub-Committee

Study 2- IRB Approval

Human Subjects Review Board
Department of Psychology
California State University,
San Bernardino

PI: Goetz

From: Michael R. Lewin

Project Title: Mate ejection and expulsion tactics (Romantic relationship breakups)

Project ID: H-16SU-07

Date: 8/26/16

Disposition: Administrative Review

Your project H-16SU-09 Mate ejection and expulsion tactics (Romantic relationship breakups) has been approved for 200 participants via SONA. This approval is valid until 8/26/17.

Good luck with your research!

Michael R. Lewin, Co-Chair
Psychology IRB Sub-Committee

Study 3- IRB Approval

Human Subjects Review Board
Department of Psychology
California State University,
San Bernardino

PI:	Nestor Maria & Cari Goetz
From:	Donna Garcia
Project Title:	Mate Expulsion Inventory
Project ID:	H-18SP-01
Date:	4/10/18

Disposition: Administrative

Your IRB proposal (Mate Expulsion Inventory, Maria & Goetz, H-18SP-01) is approved. You are permitted to collect information from 600 participants from SONA. This approval is valid from 4-10-18 to 4-10-19.

Good luck with your research!

Donna Garcia, Chair
Psychology IRB Sub-Committee

Present Study- IRB Approval

Date: 8-2-201

IRB #: IRB-FY2019-190
Title: Mate Expulsion Inventory
Creation Date: 2-26-2019
End Date: 4-2-2020
Status: Approved
Principal Investigator: Nestor Maria
Review Board: Main IRB Designated Reviewers for Department of Psychology
Sponsor:

Study History

Submission Type Initial	Review Type Exempt	Decision Exempt

Key Study Contacts

Member Nestor Maria	Role Principal Investigator	Contact 004733572@coyote.csusb.edu
Member Cari Goetz	Role Co-Principal Investigator	Contact cgoetz@csusb.edu
Member Cari Goetz	Role Co-Principal Investigator	Contact cgoetz@csusb.edu
Member Nestor Maria	Role Primary Contact	Contact 004733572@coyote.csusb.edu
Member Nestor Maria	Role Investigator	Contact 004733572@coyote.csusb.edu

Men Act Nomination Study

IRB Approval

February 22, 2019

CSUSB INSTITUTIONAL REVIEW BOARD
Administrative/Exempt Review Determination
Status: Determined Exempt
IRB-FY2019-185

Nestor Maria and Cari Goetz
Department of CSBS - Psychology
California State University, San Bernardino
5500 University Parkway
San Bernardino, California 92407

DearNestor Maria Cari Goetz :

Your application to use human subjects, titled "Men-Act Nomination MEB" has been reviewed and approved by the Chair of the Institutional Review Board (IRB) of California State University, San Bernardino has determined that your application meets the requirements for exemption from IRB review Federal requirements under 45 CFR 46. As the researcher under the exempt category you do not have to follow the requirements under 45 CFR 46 which requires annual renewal and documentation of written informed consent which are not required for the exempt category. However, exempt status still requires you to attain consent from participants before conducting your research as needed. Please ensure your CITI Human Subjects Training is kept up-to-date and current throughout the study.

Your IRB proposal IRB-FY2019-185 - Men-Act Nomination MEB is approved. You are permitted to collect information from **50** participants for$.50 from **MTurk**. This approval is valid from **2/20/19** to **2/21/20.**

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